

WHAT IS CLAIMED IS:

1. A liquid-crystal eyeglass system, comprising:  
an eyeglass frame:  
at least one liquid-crystal lens, adapted for variable opacity, arranged in said frame;  
a reflective coating on an exterior side of said at least one liquid-crystal lens, for providing said lens with substantially invariant exterior appearance, under different levels of said variable opacity; and  
a control system for controlling the level of said variable opacity of said at least one liquid-crystal lens.
2. The liquid-crystal eyeglass system of claim 1, wherein said at least one liquid crystal lens is integrated with a lens for corrective vision.
3. The liquid-crystal eyeglass system of claim 1, wherein said at least one liquid-crystal lens further includes two liquid-crystal lenses, adapted for variable opacity, and having reflective coatings on their exterior sides, for providing said lenses with substantially invariant exterior appearance, under different levels of said variable opacity, so that to an observer, said two lenses look substantially alike,  
wherein said control system controls the levels of said variable opacity of said two liquid-crystal lenses.
4. The liquid-crystal eyeglass system of claim 3, wherein each of said two liquid-crystal lenses is independently controlled by said control system.
5. The liquid-crystal eyeglass system of claim 3, wherein said two liquid crystal lenses are integrated with lenses for corrective vision.
6. The liquid-crystal eyeglass system of claim 3, selectively operative also as sunglasses.

7. The liquid-crystal eyeglass of claim 1, and further including a power source, for powering said control system.

8. The liquid-crystal eyeglass system of claim 1, and further including a fashionable designer's brand name, imprinted on said liquid-crystal eyeglass system.

9. The liquid-crystal eyeglass system of claim 1, and further including at least one sensor, coupled to said control system, for sensing that said liquid-crystal eyeglass system is worn by a user.

10. The liquid-crystal eyeglass system of claim 9, wherein said at least one sensor is operative to automatically activate said liquid-crystal eyeglass system, when sensing that said liquid-crystal eyeglass system is being worn.

11. The liquid-crystal eyeglass system of claim 9, and further including a timing device, coupled to said at least one sensor and to said control system, for indicating a timing parameter related to the wearing of the liquid-crystal eyeglass system by the user.

12. The liquid-crystal eyeglass system of claim 1, and further including a timing device, coupled to said control system, for indicating at least one parameter, selected from the group consisting of: the date, the duration of the occlusion-and-exercising session on that date, and a combination thereof.

13. The liquid-crystal eyeglass system of claim 1, and further including a data storage unit, coupled to said control system.

14. The liquid-crystal eyeglass system of claim 13, wherein said data storage unit is adapted to record at least one parameter, selected from the group consisting of: date, wearing time on that date, duration of the occlusion-and-exercising session on that date, and a combination thereof.

15. The liquid-crystal eyeglass system of claim 1, wherein said variable opacity has two levels, transparent and opaque.

16. The liquid-crystal eyeglass system of claim 1, wherein a voltage regulator is coupled to said at least one liquid-crystal lens, for varying a level of said variable opacity by varying a voltage input.

17. The liquid-crystal eyeglass system of claim 16, wherein the level of said variable opacity may be varied gradually.

18. The liquid-crystal eyeglass system of claim 16, and further including a light sensor for sensing the amount of ambient light, wherein occlusion is gray-level occlusion, and the level of said variable opacity is increased responsive to the amount of ambient light.

19. The liquid-crystal eyeglass system of claim 1, wherein a pulse generator is coupled to said at least one liquid-crystal lens, for varying a level of said variable opacity by varying a pulse frequency.

20. The liquid-crystal eyeglass system of claim 19, wherein the level of said variable opacity may be varied gradually.

21. The liquid-crystal eyeglass system of claim 19, and further including a light sensor for sensing the amount of ambient light, wherein occlusion is gray-level occlusion, and the level of gray of level of said variable opacity is increased responsive to the amount of ambient light.

22. The liquid-crystal eyeglass system of claim 1, wherein said control system is further designed to communicate with a computerized implement, selected from the group consisting of a dedicated computerized implement, a palm top, a PDA, a laptop, and a personal computer.

23. The liquid-crystal eyeglass system of claim 22, wherein said computerized implement is adapted to retrieve information from said control system.

24. The liquid-crystal eyeglass system of claim 22, wherein said computerized implement is adapted to communicate to the user.

25. The liquid-crystal eyeglass system of claim 22, wherein said computerized implement is adapted to provide feedback on compliance to the user.

26. The liquid-crystal eyeglass system of claim 22, wherein said computerized implement is adapted to receive communication from the user.

27. The liquid-crystal eyeglass system of claim 22, wherein said computerized implement is formed as a toy.

28. The liquid-crystal eyeglass system of claim 22, wherein said control system is further designed to communicate with said computerized implement in a wireless manner.

29. The liquid-crystal eyeglass system of claim 22, wherein said computerized implement is designed to communicate with a distant clinic.

30. The liquid-crystal eyeglass system of claim 1, wherein each of said at least one liquid crystal lese may be opaque for a far field while transparent for a near field.

31. A method of eye treatment, comprising:  
providing a liquid-crystal eyeglass system, comprising:  
an eyeglass frame:  
at least one liquid-crystal lens, adapted for variable opacity, arranged in  
said frame;

a reflective coating on an exterior side of said at least one liquid-crystal lens, for providing said lens with substantially invariant exterior appearance, under different levels of said variable opacity; and

a control system for controlling the level of said variable opacity of said at least one liquid-crystal lens; and

varying the level of said variable opacity of said at least one liquid-crystal lens, while maintaining its exterior appearance substantially unchanged.

32. The method of claim 31, wherein said at least one liquid-crystal lens is integrated with a lens for corrective-vision.

33. The method of claim 31, wherein said varying the level of said variable opacity further includes varying the level of said variable opacity of said two liquid-crystal lenses, while maintaining their exterior appearance substantially unchanged.

34. The method of claim 33, wherein said varying the level of said variable opacity further includes independently varying the level of said variable opacity of said two liquid-crystal lenses, while maintaining their exterior appearance substantially unchanged.

35. The method of claim 33, wherein said two liquid-crystal lenses are integrated with lenses for corrective-vision.

36. The method of claim 33, and further including operating said liquid-crystal eyeglass system as sunglasses.

37. The method of claim 31, and further including designing said liquid-crystal eyeglass system so as to hide their true character, and make them appear as ordinary eyeglasses.

38. The method of claim 31, and further including designing said liquid-crystal eyeglass system by a fashionable designer.

39. The method of claim 31, and further including varying the level of said variable opacity by pulse frequency.

40. The method of claim 31, and further including varying the level of said variable opacity by voltage input.

41. The method of claim 31, and further including varying the level of said variable opacity gradually.

42. The method of claim 31, and further including varying the level of said variable opacity between two levels, transparent and opaque.

43. The method of claim 31, and further including varying the level of said variable opacity responsive to the amount of ambient light.

44. The method of claim 31, and further including providing intermittent occlusion to exercise at least one eye of the user.

45. The method of claim 31, and further including providing intermittent occlusion to exercise the two eyes of the user.

46. The method of claim 31, and further including sensing that said liquid-crystal eyeglass system is worn by a user.

47. The method of claim 46, and further including automatically activating said liquid-crystal eyeglass system, when said sensing occurs.

48. The method of claim 46, and further including timing the wearing of the liquid-crystal eyeglass system by the user, when said sensing occurs.

49. The method of claim 46, and further including dating the wearing of the liquid-crystal eyeglass system by the user, when said sensing occurs.

50. The method of claim 31, and further including recording at least one parameter, selected from the group consisting of: date, wearing time on that date, duration of the occlusion-and-exercising session on that date, and a combination thereof.

51. The method of claim 31, and further including retrieving information regarding at least one parameter, selected from the group consisting of, date, wearing time during that date, duration of the occlusion-and-exercising session on that date, and a combination thereof.

52. The method of claim 31, and further including communicating with a distant clinic.

53. The method of claim 31, and further including changing the treatment program as treatment progresses.

54. The method of claim 31, and further including providing a feedback to the user, regarding compliance.

55. The method of claim 54, wherein said providing is performed in a playful manner.

56. The method of claim 31, and further including reminding the user to put his liquid-crystal eyeglass system on.

57. The method of claim 56, wherein said reminding is performed in a playful manner.

58. The method of claim 31, and further including alerting the user to a scheduled change in the liquid-crystal eyeglass system operation.

59. The method of claim 58, wherein said alerting is performed in a playful manner.

60. The method of claim 31, and further including allowing the user to select a desired operational manner for a therapy-free time.

61. The method of claim 31, applicable for amblyopia.

62. The method of claim 31, applicable for a weak eye.

63. The method of claim 31, applicable for strabismus.

64. A toy, for encouraging compliance with a therapeutic program, comprising:

a body, shaped as a toy; and

a computerized implement, enclosed in said body, adapted to monitor said therapeutic program and to communicate with a user.

65. The toy of claim 64, adapted to provide feedback regarding compliance, in a playful manner.

66. The toy of claim 64, adapted to remind the user to comply, in a playful manner.

67. The toy of claim 64, adapted to alert the user of an upcoming therapeutic procedure, in a playful manner.

68. The toy of claim 64, designed as a Tamacuchi, which is cared for by compliance.

69. The toy of claim 64, designed for encouraging compliance with a liquid crystal glass system.



70. The toy of claim 64, designed for encouraging compliance with a at least one eye disorder, selected from the group consisting of amblyopia, weak eye, and strabismus.

71. A method of eye treatment, comprising:  
providing a liquid-crystal eyeglass system, which comprises:  
an eyeglass frame:  
at least one liquid-crystal lens, adapted for variable opacity, arranged in said frame;  
a sensor, arranged on said liquid-crystal eyeglass system, for sensing when said liquid-crystal eyeglass system is worn, and  
a control system, for receiving signals from said sensor and for controlling the level of said variable opacity of said at least one liquid-crystal lens; and  
automatically sensing when said liquid-crystal eyeglass system is worn.

72. The method of claim 71, and further including automatically activating said liquid-crystal eyeglass system, when said sensing occurs.

73. The method of claim 71, and further including timing the wearing of the liquid-crystal eyeglass system by the user, when said sensing occurs.

74. The method of claim 71, and further including dating the wearing of the liquid-crystal eyeglass system by the user, when said sensing occurs.

75. The method of claim 71, and further including recording at least one parameter, selected from the group consisting of: date, wearing time on that date, duration of the occlusion-and-exercising session on that date, and a combination thereof.

76. The method of claim 71, and further including retrieving information regarding at least one parameter, selected from the group consisting of, date, wearing time during that date, duration of the occlusion-and-exercising session on that date, and a combination thereof.

77. The method of claim 71, and further including communicating with a distant clinic.

78. The method of claim 71, and further including providing a feedback to the user, regarding compliance.

79. The method of claim 71, and further including reminding the user to wear said system.

80. The method of claim 71, wherein said at least one liquid-crystal lens, further includes two liquid-crystal lenses, adapted for variable opacity, arranged in said frame.